

of opinion as in the procedure of root filling, the author is not dogmatic, but gives a fair appraisal of the systems as taught in different schools.

The arrangements of the sections is excellent, and the description of the various conditions clear. This, together with the plates, greatly assists the general practitioner in the differential diagnosis of the condition with which he is confronted. The treatment indicated is as a rule brief but sufficient, but the main value to him is determining diagnosis. It is not primarily a book on operative dental surgery.

It is recommended to every general dental practitioner who wishes to keep abreast of current thought and will enable him to deal with the unexpected.

J. C. S.

PRACTICAL INTRODUCTION TO MICROBIOLOGY. By E. Margery Lindsay, B.Sc., Ph.D. (Pp. xxvii + 227; photos 14; figs. 26. 45s.) London: Spon, 1962.

IN recent years a knowledge of microbiology has become essential for workers in many different disciplines. The importance of the subject in relation to medicine and agriculture is well known. That the growth of micro-organisms may produce problems for engineers may come as a surprise to many of us.

Engineers in industry, particularly chemical and biochemical engineers, have to deal with such problems and they find difficulty in tackling them because they lack the knowledge of the characteristics of the various organisms concerned.

Dr. Lindsay's book was written with the object of supplying the necessary information. It covers a very wide field, ranging from a classification and description of micro-organisms, enzymology, cultural and other techniques, correlated activities of micro-organisms and microbiological estimation of natural products. The information given is necessarily selected and condensed since it is contained in a volume of 227 pages.

Hospital engineers do not seem to be catered for as the section on sterilisation is brief and incomplete, and although there is a description of an autoclave, there is no mention of the necessity of the proper method of using it or of testing its efficiency.

Valuable space is given to a description of the method of performing the Rideal-Walker test for estimation of the strength of antiseptics, a test which is regarded nowadays as being of limited value.

Northern Irish readers would not agree with the statement (page 122) that flax fibres are composed mainly of lignin; they are in fact mainly composed of cellulose.

Much useful miscellaneous information may be gleaned from the pages of this book and for those who wish to gain a thorough knowledge of any branch of the subject, an adequate bibliography is to be found at the end of each chapter.

The illustrations are good, the printing is clear, and the book is pleasant to handle. E. O. B.

MENTAL RETARDATION: RESEARCH PUBLICATION OF ASSOCIATION FOR RESEARCH IN NERVOUS AND MENTAL DISEASE. Volume 39. (Pp. xii + 331; figs. 73. 120s.) London: Baillière, Tindall & Cox, 1962.

THESE papers are a record of the Association meeting held in December, 1959, in New York. This was concerned with a "consideration of those conditions given innately through genetic determinants or as they occur in the early developmental processes of the growing foetus or infant which lead to arrest or limitation of cerebral development so as to preclude the successful evolution of an intellectual capacity adequate for an independent social existence." These wide terms allowed a group of competent, and often distinguished, workers to review a wide range of subjects. Some of these papers, such as morphological criteria of growth and maturation of the nervous system by Yakovlev, cerebral birth injury by Dekaban and a discussion by Zuelzer of bilirubin metabolism and birth injury, range over a wide field. Others, such as that on the somatic chromosomes in mongolism by Lejeune and Turpin, record briefly advances in rapidly developing fields. There is an altogether too brief report by Windle on his most important work on the structural and functional sequelae of asphyxia neonatorum as found in monkeys in his research station in Puerto Rico. Physical disturbances

receive predominant attention though there is some discussion of infantile deprivation and of the effect of hypoacusis and dysacusis.

The scholarship is impressive, but many of the papers are overloaded with detail and basic, and especially new, concepts are few and seldom presented in a form to stimulate discussion. Too often the discussion fails to elucidate or amplify the papers. The book is beautifully produced and accurately printed, but the delay of over two years is too high a price to pay for this. Already, especially in such aspects as chromosomes in mongolism, the presentation is dated. Nevertheless much valuable information, otherwise difficult to locate is assembled here.

J. E. M.

REVIEW OF MEDICAL MICROBIOLOGY. By Ernest Jawetz, Joseph L. Melnick, and Edward A. Adelberg. Fifth Edition. (Pp. 399; illustrated. \$5.50.) Los Altos, California: Lange Medical Publications, 1962.

THIS book aims at presenting accurate and up-to-date information about medical microbiology for practising clinicians, house officers and students.

Because of the great increase of knowledge of the fundamental sciences gained in recent years, the opening chapters are devoted to a discussion of their relationship to microbiology. The rest of the book includes sections on bacteriology, mycology, virology and antimicrobial chemotherapy with the welcome addition to this edition of a chapter on medical parasitology.

Part of the section on viruses has been revised and rewritten. It includes new material on such substances as viruses and cancer, enteroviruses and the isolation of viruses. The reading of the chapter on the isolation of viruses from clinical specimens would prove rewarding to those who may, with reason, be in some doubt as to what specimens to send for laboratory examination, when to take them and how to send them to the laboratory.

Though not a word is wasted, the book is easy to read, the illustrations are excellent and the general arrangement of the text makes it an easy book for reference.

The book is a "paper-back" but the binding is strong and, as one knows from experience, it stands up to quite hard wear. It is good value for the expenditure of about 40 shillings.

E. O. B.

STATISTICAL METHODS IN CLINICAL AND PREVENTIVE METHODS. By Sir Austin Bradford Hill. (Pp. viii + 610; illustrated. 63s.) Edinburgh and London: E. & S. Livingstone, 1962.

THIS book contains twenty-six papers published since 1948 in various British and American medical journals; over half of them have appeared in the "British Medical Journal." They are arranged in three groups: clinical trials and treatment, field trials of vaccines, and studies of epidemiology and aetiology of disease. In each group, the "philosophy" and methodology are outlined in the first few papers and illustrated in the remainder by practical applications.

Three papers set out the philosophy and methodology of clinical trials. They contain no statistics and should be read by anybody contemplating, for the first time, a clinical evaluation of treatment; indeed many who have attempted such evaluation might find much to interest them here. The practical examples in this section are reports of trials on streptomycin treatment of pulmonary tuberculosis, chemotherapy of pulmonary tuberculosis in young adults, antihistaminic drugs in the prevention and treatment of the common cold, cortisone and aspirin therapy for early rheumatoid arthritis, and long term anticoagulant therapy for cerebrovascular disease.

The section on the experimental approach in preventive medicine starts with the three Harben lectures of 1957 on the problems of experiments in man, controlled trials of vaccines, and problems associated with trials for influenza and the common cold. Reports to the Medical Research Council by their committees follow; the subjects are: the prevention of whooping cough by vaccination, B.C.G. and vole bacillus vaccines in the prevention of tuberculosis, and trials of an influenza vaccine. Large numbers of subjects and observers were inevitable and consequently the details of the organisation and conduct of these trials are particularly valuable for future reference.